Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (WITHDRAWN) A polypeptide capable of binding a chaperon receptor for preserving, restoring or improving a physiological property of sperm cells.

2. (WITHDRAWN) The polypeptide of claim 1 comprising at least one molecule selected from the group consisting of a chaperone polypeptide, a heat shock protein (HSP), a stress shock protein, a glucose regulated protein (GRP), a Sec A, a Sec B, a Sec Y, a GroEL, a matrix protein, a molecule capable of binding sperm cell chaperone receptor, or analogs or fragments thereof.

3. (WITHDRAWN) The polypeptide of claim 2, wherein said HSP is HSP60.

4. (WITHDRAWN) The polypeptide of claim 2, wherein said GRP is GRP 78.

5. (WITHDRAWN) The polypeptide of claim 2, wherein said matrix protein is a surface protein of epithelial cells.

6. (WITHDRAWN) The polypeptide of claim 5, wherein said epithelial cells are oviduct epithelial cells.

7. (WITHDRAWN) The polypeptide of claim 1, wherein said physiological property is at least one of motility, movement characteristic, fertility, oocytes binding, fusion with an oocyte, viability, acrosome integrity, acrosome reaction, maturity, or resistance to at least one of cooling, freezing or thawing.

8. (WITHDRAWN) The polypeptide of claim 1, wherein said sperm cells are mammalian sperm cells.

9. (WITHDRAWN) The polypeptide of claim 1, being in concentration of between 0.1 to 100 ng/ml of sperm diluent medium.

10. (WITHDRAWN) The polypeptide of claim 1, being in concentration of between 1.0 to 25 ng/ml of sperm diluent medium.

11. (WITHDRAWN) A composition comprising at least one polypeptide capable of binding chaperon receptor in an amount effective to preserve, restore or improve at least one physiological property of sperm cells, and a physiologically acceptable carrier.

12. (WITHDRAWN) The composition of claim 11, wherein said amount is between 0.1 to 100 ng/ml of sperm diluent medium.

13. (CURRENTLY AMENDED) A method for preserving, restoring or improving a physiological property of sperm cells comprising contacting said sperm cells with a polypeptide capable of binding chaperone-receptors.

14. (CURRENTLY AMENDED) The method of claim 13, wherein said polypeptide comprises at least one molecule selected from the group consisting of ~~a chaperone polypeptide,~~ a heat shock protein ~~(HSP)~~, a stress shock protein, a glucose regulated protein ~~(GRP)~~, a Sec A, a Sec B, a Sec Y, a GroEL, a matrix protein, a molecule capable of binding a sperm cell chaperone receptor, or analogs or fragments thereof.

15. (ORIGINAL) The method of claim 13, wherein said contacting is performed on fresh semen, frozen semen or thawed semen.

16. (NEW) A method for preserving, restoring or improving a physiological property of sperm cells comprising contacting said sperm cells with a chaperon polypeptide or an analog or fragment thereof.

17. (NEW) The method of claim 16, wherein said chaperon polypeptide comprises at least one molecule selected from the group consisting of a heat shock protein, a stress shock protein, a glucose regulated protein, a Sec A, a Sec B, a Sec Y, a GroEL, a matrix protein, a molecule capable of binding a sperm cell chaperone-receptor, or analogs or fragments thereof.

18. (NEW) The method of claim 17, wherein the heat shock protein is HSP60.

19. (NEW) The method of claim 17, wherein the glucose regulated protein is GRP78.

20. (NEW) The method of claim 17, wherein the matrix protein is a surface protein of epithelial cells.

21. (NEW) The method of claim 20, wherein the epithelial cells are oviduct epithelial cells.

22. (NEW) The method of claim 16, wherein the physiological property of sperm cells is selected from the group comprising motility, movement characteristics, fertility, oocyte binding, oocyte fusion, viability, acrosome integrity, acrosome reaction, maturity, and resistance to at least one of cooling, freezing and thating.

23. (NEW) The method of claim 16, wherein the sperm cells are mammalian sperm cells.

24. (NEW) The method of claim 16, wherein said contacting is performed on fresh semen, frozen semen or thawed semen.